User Manual

M1 Series Wireless Modem

2/24/2010

Forwell Wireless Co., Ltd.
Shandy Feng

M1 Series Wireless Modem

User Manual

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Power by Forwell Wireless

Important Notice

Due to the nature of wireless communications, transmission and reception of data can never be guaranteed. Data may be delayed, corrupted (i.e., have errors) or be totally lost. Although significant delays or losses of data are rare when wireless devices such as the Forwell Wireless device are used in a normal manner with a well‐constructed network, the Forwell Wireless device should not be used in situations where failure to transmit or receive data could result in damage of any kind to the user or any other party, including but not limited to personal injury, death, or loss of property. Forwell Wireless accepts no responsibility for damages of any kind resulting from delays or errors in data transmitted or received using the Forwell Wireless device, or for failure of the Forwell Wireless device to transmit or receive such data.

Safety and Hazards

Do not operate the Forwell Wireless device in areas where blasting is in progress, where explosive atmospheres may be present, near medical equipment, near life support equipment, or any equipment which may be susceptible to any form of radio interference. In such areas, the Forwell Wireless device MUST BE POWERED OFF. The Forwell Wireless device can transmit signals that could interfere with this equipment. Do not operate the Forwell Wireless device in any aircraft, whether the aircraft is on the ground or in flight. In aircraft, the Forwell Wireless device MUST BE POWERED OFF. When operating, the Forwell Wireless device can transmit signals that could interfere with various onboard systems.

Note: Some airlines may permit the use of cellular phones while the aircraft is on the ground and the door is open. Forwell Wireless device may be used at this time.

The driver or operator of any vehicle should not operate the Forwell Wireless device while in control of a vehicle. Doing so will detract from the driver or operator's control and operation of that vehicle. In some states and provinces, operating such communications devices while in control of a vehicle is an offence.

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Introduction

This user guide describes the M1 series wireless modem. The aim of the manual is to ease the test, install and disposition.

> ***Note: Though all features are documented in this manual, new features may still be in beta stage at publication and therefore may not yet be validated. Please refer to the Customer Release Note for complete and detailed information regarding beta and validated features at time of release.***

Document History

Version	Comments	Date	Writer
1.00	Standard	2008-7-7	Yuhui
1.10	Fix some bugs	2009-5-3	Gavin
2.00	Modify the document structure Add product type Add function description	2010-2-24	Shandy
2.01	Add the M12G111 baud rate setting describe	2010-4-23	Shandy

References

M12S211 MODEM DATASHEET
M12Z111 MODEM DATASHEET
M12AZ1411 MODEM DATASHEET
M12AC111 MODEM DATASHEET
M12H111 MODEM DATASHEET
M12O111 MODEM DATASHEET
M12O211 MODEM DATASHEET
M12N111 MODEM DATASHEET
M12N211 MODEM DATASHEET
M12G111 MODEM DATASHEET
M13Z311 MODEM DATASHEET
M13Z811 MODEM DATASHEET
M13H211 MODEM DATASHEET
M13H311 MODEM DATASHEET

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Abbreviations

APN	**Access Point Name**
DAC	Digital Analog Converter
GGSN	Gateway GPRS Support Node
GPRS	General Packet Radio Service
IP	Internet Protocol
KB	Kilobyte
MCC	Mobile Country Code
MNC	Mobile Network Codes
MS	Mobile Station
PDU	Protocol Data Unit
PLMN	Public Land Mobile Network
RSSI	Received Signal Strength Indication
SMA	Small Adapter
SMS	Short Message Services

Produclist

产品型号		描述		
M11	M11S111	GSM	900/1800	RS-232(DB9)
M12	M12S211	GPRS	900/1800	RS-232(DB9)
	M12Z111	GPRS	850/900/1800/1900	RS-232(DB9)
	M12AZ1411	GPRS	850/900/1800/1900	RS-232(DB9)
	M12AC111	GPRS	850/900/1800/1900	RS-232(DB9)
	M12O111	GPRS	900/1800/1900	RS-232(DB9)
	M12N111	GPRS	900/1800	RS-232(DB9)
	M12N211	GPRS	900/1800	RS-232(DB9)
	M12G111	GPRS	900/1800	RS-232(DB9)
M13	M12H111	GPRS	850/900/1800/1900	RS-232(DB9)
	M13Z311	CDMA	800	RS-232(DB9)
	M13Z811	CDMA	450	RS-232(DB9)
	M13H211	CDMA	800	RS-232(DB9)
	M13H311	CDMA	450	RS-232(DB9)

Introduction

With the development of wireless communication technologies, wireless products are being adopted in numerous industrial and civilian fields. Shenzhen Forwell Wireless Co., Ltd. a leader of wireless communication equipment manufacturer releases the M1 Series Wireless Modems, which support various frequency bands of GSM/GPRS/CDMA 1X, and provide industrial terminal solutions for 2.5G/2.75G communication.

M1 series wireless modem adopts industrial level modules, specially designed for the complicated industrial environment which compatible with EMC, and will be your best choose of wireless communication.

Features

- *AT command interface*
- *Support GSM（GPRS）/CDMA2000 1X*
- *Support Voice, SMS and CSD*
- *Dial up, data communication(except M11)*
- *Support APN or VPDN(except M11)*
- *LED: power, ring, data*
- *Interface: RS232/RS485/TTL*
- *Watchdog(software and hardware)*
- *Always online detect*
- *Steel shell for anti-electromagnetic interference*

Specification

产品型号	射频特性			
M11S111	GSM phase 2/2+	GSM	EGSM 900 Mhz	Class 4 (2W)
			DCS 1800 Mhz	Class 1 (1W)
M12S211	GSM phase 2/2+	GPRS	EGSM 900 Mhz	Class 4 (2 W)
			DCS 1800 Mhz	Class 1 (1W)
M12Z111	GSM phase 2/2+	GPRS	GSM 850 Mhz	Class 4 (2W)
			EGSM 900 Mhz	Class 4 (2W)
			DCS 1800 Mhz	Class 1 (1W)
			PCS 1900Mhz	Class 1 (1W)
M12AZ1411	GSM phase 2/2+	GPRS	GSM 850 Mhz	Class 4 (2W)
			EGSM 900 Mhz	Class 4 (2W)
			DCS 1800 Mhz	Class 1 (1W)

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			PCS 1900Mhz	Class 1 (1W)
M12AC111	GSM phase 2/2+	GPRS	GSM 850 Mhz	Class 4 (2W)
			EGSM 900 Mhz	Class 4 (2W)
			DCS 1800 Mhz	Class 1 (1W)
			PCS 1900Mhz	Class 1 (1W)
M12H111	GSM phase 2/2+	GPRS	GSM 850 Mhz	Class 4 (2W)
			EGSM 900 Mhz	Class 4 (2W)
			DCS 1800 Mhz	Class 1 (1W)
			PCS 1900 Mhz	Class 1 (1W)
M12O111	GSM phase 2/2+	GPRS	EGSM 900 Mhz	Class 4 (2W)
			DCS 1800 Mhz	Class 1 (1W)
			PCS 1900 Mhz	Class 1 (1W)
M12N111	GSM phase 2/2+	GPRS	EGSM 900 Mhz	Class 4 (2W)
			DCS 1800 Mhz	Class 1 (1W)
M12N211	GSM phase 2/2+	GPRS	EGSM 900 Mhz	Class 4 (2W)
			DCS 1800 Mhz	Class 1 (1W)
M12G111	GSM phase 2/2+	GPRS	EGSM 900 Mhz	Class 4 (2W)
			DCS 1800 Mhz	Class 1 (1W)
M13Z311		TIA/EIA-95B CDMA2000 1X	824.64MHZ~848.37MHZ 869.94MHZ~893.37MHZ	
M13Z811		TIA/EIA-95B CDMA2000 1X	450 Mhz	
M13H211		TIA/EIA-95B CDMA2000 1X	824.64MHZ~848.37MHZ 869.94MHZ~893.37MHZ	
M13H311		CDMA	450 Mhz	

Application

Remote Data Monitor and Control
Water, gas and oil flow metering
AMR (automatic meter reading)
Power station monitoring and control
Remote POS (point of sale) terminals
Traffic signals monitor and control
Fleet management
Power distribution network supervision
Central heating system supervision
Weather station data transmission
Hydrologic data acquisition
Vending machine
Traffic info guidance
Parking meter
Telecom equipment supervision (Mobile base station, microwave or optical relay station)
Oil field data acquisition
Warehouse supervision

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Device Connection

LED	Description
Power	ON: boot
	FLASH: running
Ring	ON: boot
	FLASH: incoming call
Data	ON: boot
	FLASH: data transfer

NOTE ： The indicator lamp of M12AZ1411 AND M12AC111 is different form above，as shown in the diagram below：

LED	描述
Serial	OFF： No serial data communication
	FLASH： serial data communication
Ring	OFF： NO call
	ON： Telephone ringing
Data	ON： Device Boot
	FLASH： data transfer

Interface	Description
Antenna	SMA
SIM	3.3V
Power	Φ2.0
Serial Port	DB9

Insert SIM/UIM card.

Note: Don't insert or remove the SIM/UIM card in the power on statu.

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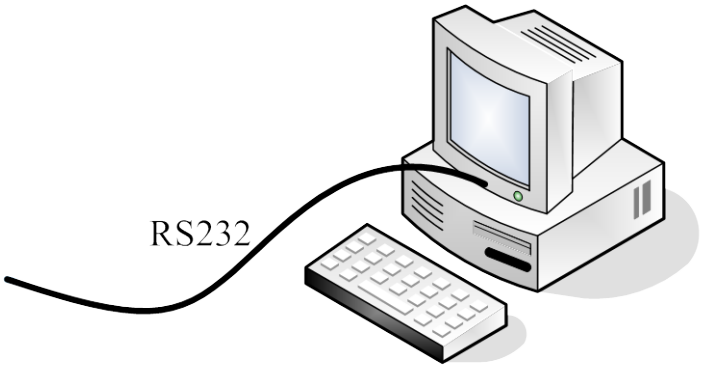
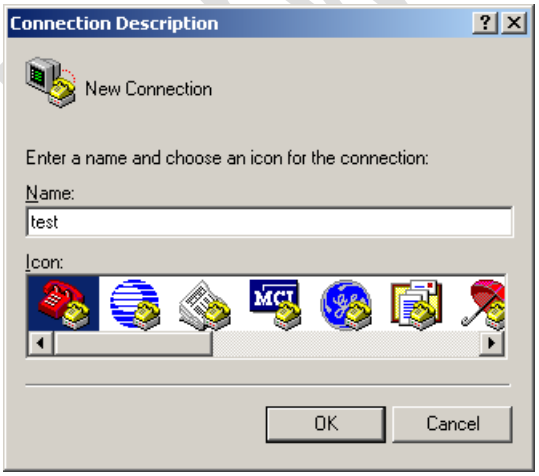


Assemble the antenna, connect to PC via RS-232, power on.

Open the Hyperterminal

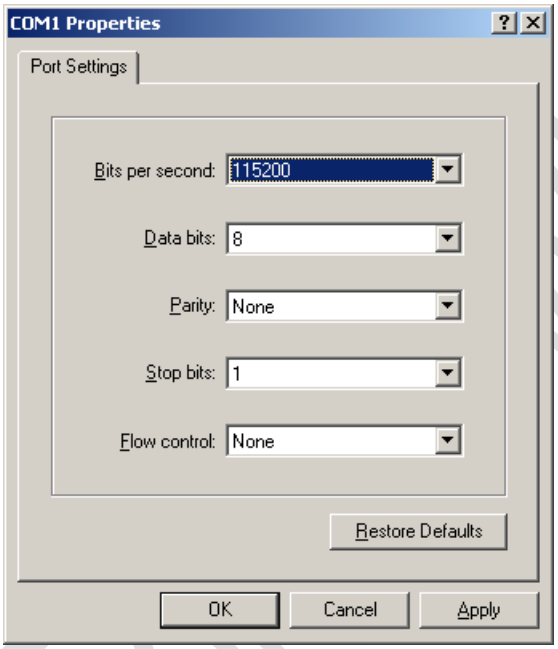
Windows start menu→all programs→Accessories→Communications→Hyper Terminal

HyperTerminal
Private Edition, Ver. 5.0
by Hilgraeve Monroe, Michigan USA
For more power and convenience, upgrade to hot new HyperACCESS, TODAY!
Lot 996221
Upgrade Info...
Copyright1999 Hilgraeve Inc.



Enter the name of the connection.

Choose the communication port.



Setting the port properties.

Note: the ForwellWireless Modem port properties factory default is 115200/8/n/1/0, as above picture.

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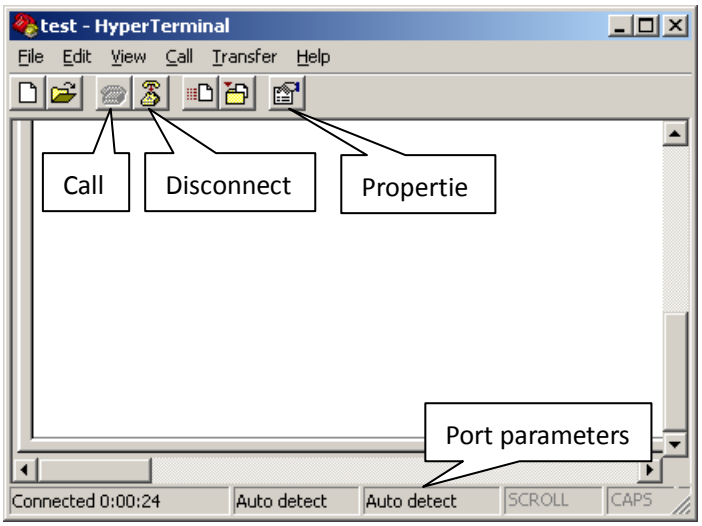
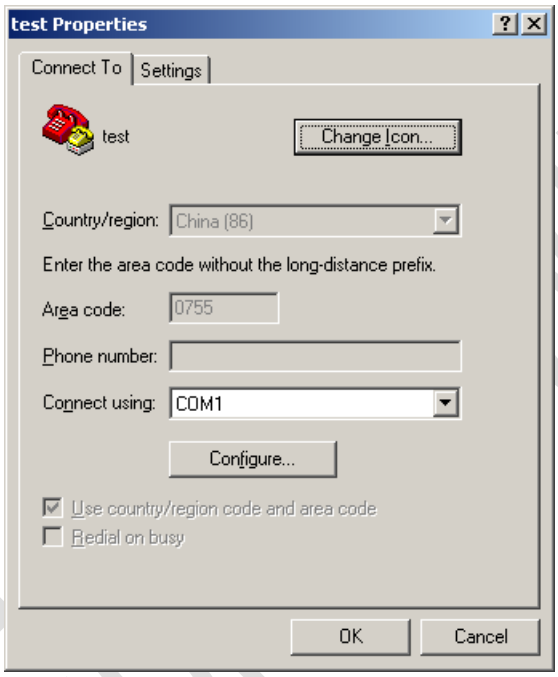


If the port parameters is different to your setting, click disconnect, then click properties.



Click the Configure.

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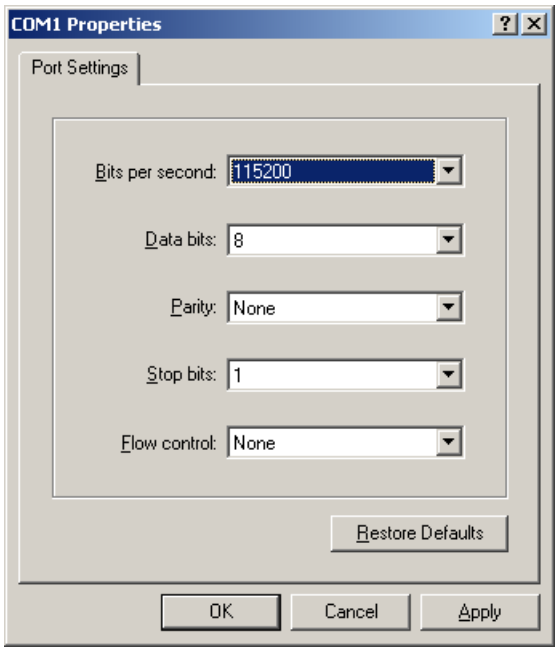
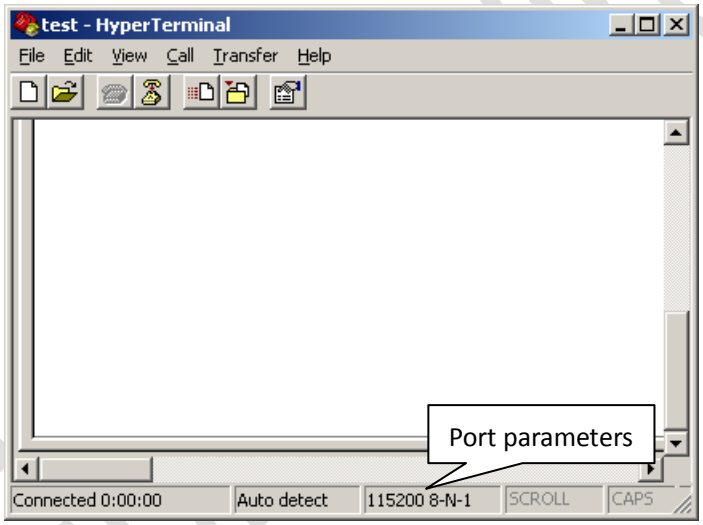


Comfirm the parameters again.



After setting, the Hyper Terminal window as above.

Click call buttom, the Hyper Terminal is ready for operate.

AT Command

AT Command Rule

AT<cr> // return Ok
AT+XXX=YYY<cr> // setting parameter
AT+XXX？<cr> // query parameter
AT&F<cr> // restore Modem parameters to factory default
AT&W<cr> // save parameters

Note: the AT command not case-sensitive, prefix by at and terminate by <cr>

Commonest Command

AT+CSQ<cr>// signal query
AT+IPR? <cr> // query device baud rate
AT+IPR=115200<cr> // baud rate setting, support 115200/57600/38400/19200/9600/4800/2400/1200
AT+BDR=115200<cr> // baud rate setting, M12G111 only
ATD13612345678;<cr> // voice call
ATD13612345678<cr> // data call
ATA<cr> // incoming call answer
+++ // switch data mode to command mode
ATO<cr> // switch command mode back to data mode
ATH<cr> // hang up

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SMS

M11/M12 SMS

M11/M12 include: M11S111，M12S211，M12Z111，M12O111，M12N111，M12N211，M12G111，M12H111

M11/M12 Query SMS Center

AT+CSCA<cr> *// query the SMS center number which auto get from network*
+CSCA : "+8613800755500" , 145
OK

M11/M12 ASCII Message

AT+CMGF=1<cr> *// setting ASCII mode*
OK
AT+CMGS="13691978232"<cr> *// destination number*
>Hello，Forwell！！！→ *// message by ASCII sets, terminate character "→" means Ctrl+Z(0X1A)*
+CMGS：nnn *// message stamp*
OK

Note: if no message stamp return, please resend the message again

M11/M12 Message Relate Command

AT+CMGF=1<cr> *// setting ASCII mode*
AT+CMGL="ALL"<cr> *// query the SMS list*
AT+CMGR=n<cr> *// read the SMS, location value is n*
AT+CMGD=n<cr> *// delete the SMS, location value is n*

M11/M12 Receive SMS

AT+CPMS=MT,MT,MT<cr>// Preferred SMS message storage
AT+CSMS=1<cr> *// Select Message Service*
+CSMS: 1, 1, 1
OK
AT+CNMI=1,1<cr> *// New SMS message indications setting*
OK

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+CMTI : “MT” ,1 // New SMS message indications
AT+CMGR=1<cr> // read SMS
+CMGR: 0, 23
544651984165416511515…

AT+CSMS=1<cr> // Select Message Service
+CSMS: 1, 1, 1
OK
AT+CNMI=2,2<cr> // New SMS message indications setting
OK
*+CMT : “+86138******* ” , , “04/06/26 ” // auto display the new SMS*
Hello
AT+CNMA<cr> // new SMS acknowledge
OK

Note: in the auto display mode, there is the AT+CNMA must sent after received the new SMS

M12Z1411/M12AZ1411/M12Z1511/M12AZ1511 SMS

M12Z1411/M12AZ1411/M12Z1511/M12AZ1511 Query SMS Center

AT+CSCA<cr> // query the SMS center number which auto get from network
+CSCA : “+8613800755500” , 145
OK

M12Z1411/M12AZ1411/M12Z1511/M12AZ1511 ASCII Message

AT+CMGF=1<cr> // setting ASCII mode
OK
AT+CMGS=”13691978232”<OXOD> // destination number
>Hello，Forwell ! ! ! → // message by ASCII sets, terminate character ” →” means Ctrl+Z(0X1A)
+CMGS：nnn // message stamp
OK

Note: if no message stamp return, please resend the message again

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M12Z1411/M12AZ1411/M12Z1511/M12AZ1511 Message Relate Command

AT+CMGF=1<cr> *// setting ASCII mode*
AT+CMGL="ALL"<cr> *// query the SMS list*
AT+CMGR=n<cr> *// read the SMS, location value is n*
AT+CMGD=n<cr> *// delete the SMS, location value is n*

M12Z1411/M12AZ1411/M12Z1511/M12AZ1511 Receive SMS

AT+CPMS=MT,MT,MT<cr>// Preferred SMS message storage
AT+CSMS=1<cr> *// Select Message Service*
+CSMS: 1, 1, 1
OK
AT+CNMI=1,1<cr> *// New SMS message indications setting*
OK
+CMTI : "MT" ,1 *// New SMS message indications*
AT+CMGR=1<cr> *// read SMS*
+CMGR: 0, 23
544651984165416511515…

AT+CSMS=1<cr> *// Select Message Service*
+CSMS: 1, 1, 1
OK
AT+CNMI=2,2<cr> *// New SMS message indications setting*
OK
*+CMT : "+86138******* " , , "04/06/26 "* *// auto display the new SMS*
Hello
AT+CNMA<cr> *// new SMS acknowledge*
OK

Note: in the auto display mode, there is the AT+CNMA must sent after received the new SMS

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M13Z311/M13Z811 SMS

M13Z311/M13Z811 Send SMS

at+zmsgl=1,2<cr> *// ASCII mode*
OK
at+cmgs="13691978232"<cr> *// destination mobile number*
Forwell Wireless<ctrl+z> *// SMS content*
+CMGS:1
OK
+CDS: 2,1,"13691978232",129,"07/08/02,11:28:40","09/08/02,11:28:45",32768

M13Z311/M13Z811 Commonest SMS Command

AT+CMGL="ALL"<cr> *// list SMS*
AT+CMGR=n<cr> *// read SMS, location value is n*
AT+CMGD=n<cr> *// delete SMS, location value is n*

M13Z311/M13Z811 Receive SMS

at+cnmi=2,1,1,1,0 *// setting new SMS notification*
OK
+ZCANS:3
+ZCCNT:3,14
+CMTI: "MT",0
+ZCEND:25

at+cnmi=2,2,1,1,0 *// setting new SMS auto display*
OK
+ZCANS:3
+ZCCNT:3,14
+CMT:"13360504647","07/08/02,03:02:00",129,1,2,0,5 ABCD
+ZCEND:25

M13H211/M13H311 SMS

AT$HSMSSD=<destID>,<length>[,<ack>[,<format>[,<prt>[,<prv>]]]] *// Send SMS*

segment	parameter	Describe
<destID>		Destination mobile number

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<length>		SMS content length
<ack>	0	No acknowledge
	1	Acknowledge
<format>	1	ASCII
	2	Unicode
	3	8-bit
<prt>	0	Normal
	1	Interactive
	2	Urgent
	3	Emergency
<prv>	0	Normal
	1	Restricted
	2	Confidential
	3	Secret

M13H211/M13H311 Send SMS

AT$HSMSSD=13691978232, 11, 1,1, 1, 1 // destination mobile number: 13691978232
// SMS content length: 11
// acknowledge
// ASCII
// priority: interactive
// encryption: restricted
Hello,world<ctrl+z> // SMS content and terminal charactor
OK
$HSMSSD: OK // acknowledge

M13H211/M13H311 Commonest SMS Command

AT$HSMSML=4<cr> // list SMS
n=1: readed
n=2: unread
n=3: sent
n=4: unsend
AT$HSMSRD=n<cr> // read SMS, location value is n
AT+CMGD=n<cr> // delete SMS, location value is n

M13H211/M13H311 Receive SMS

+CMTI: ”MT”, n // SMS acknowledge: normal SMS, location n
+CDSI: ”SR”, n // SMS acknowledge: statu report, location n

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$HMTI: ”MT”, n,m *// SMS acknowledge: normal SMS, location n, storage media m*
$HDSI: ”SR”, n, m *// SMS acknowledge: statu report, location n, storage media m*

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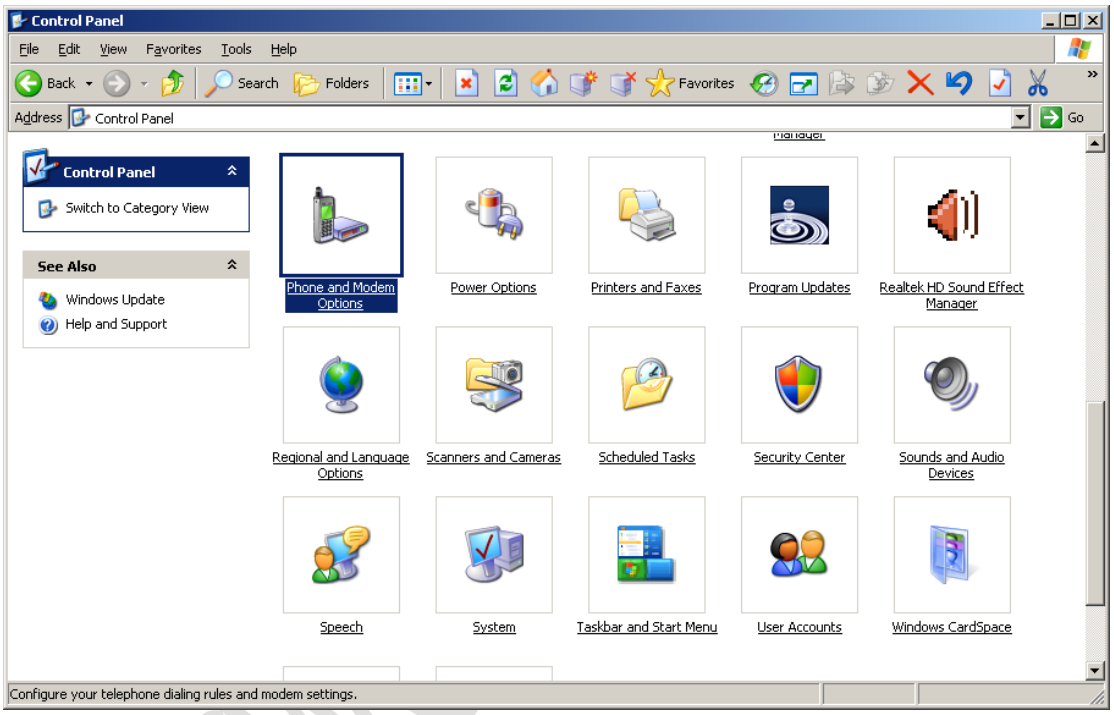
Dial Up

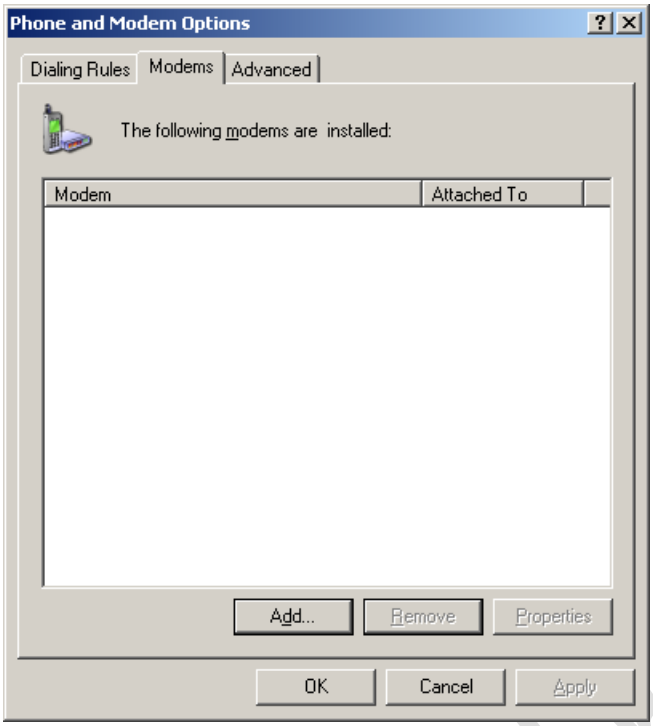
Follow is the dial up instance, use the Windows XP environment.

Note: M11S111 GSM Modem do not support the dial up function.

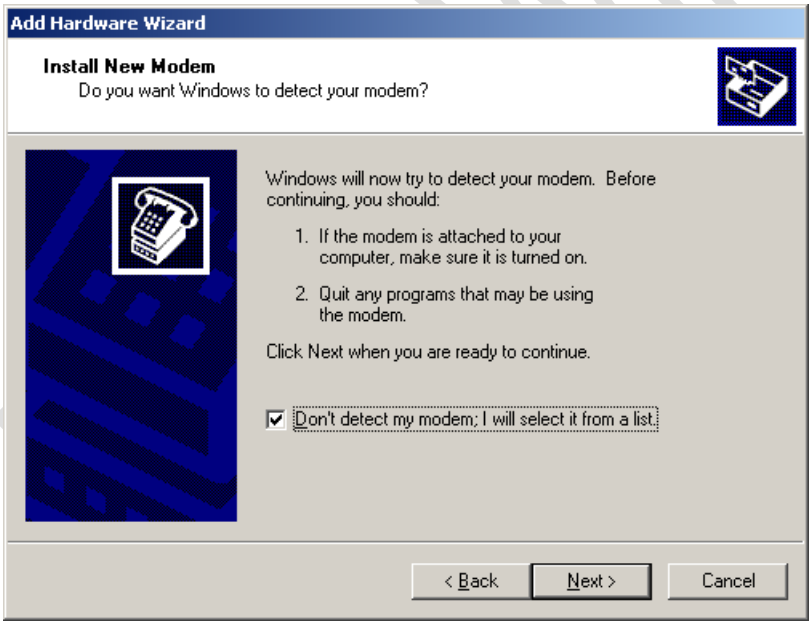
Phone and Modem Option



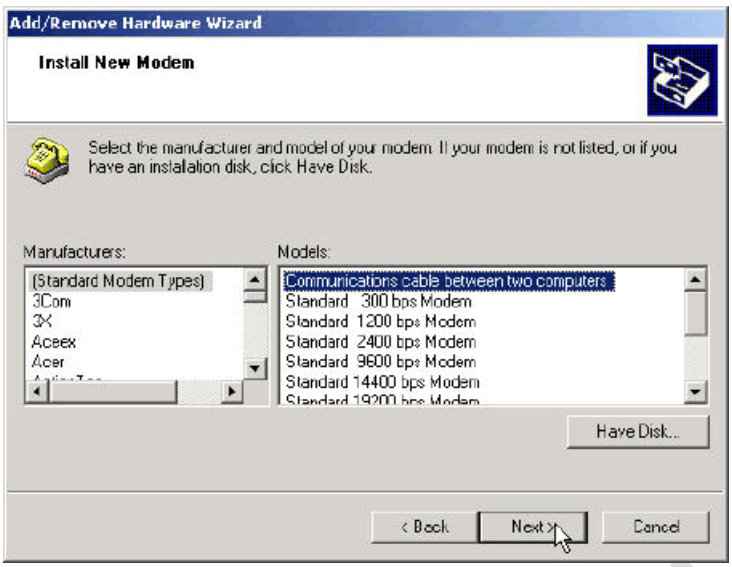
My Computer→Control Panel→Phone and Modem Options



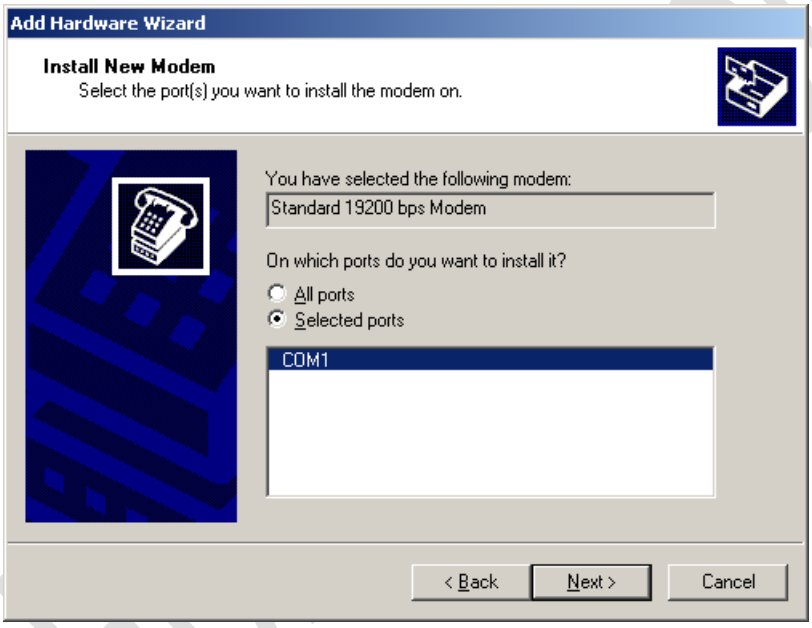
Modem tab→Add


Add Hardware Wizard
Install New Modem
Do you want Windows to detect your modem?
Windows will now try to detect your modem. Before continuing, you should:
1. If the modem is attached to your computer, make sure it is turned on.
2. Quit any programs that may be using the modem.
Click Next when you are ready to continue.
Don't detect my modem; I will select it from a list.
< Back
Next >
Cancel

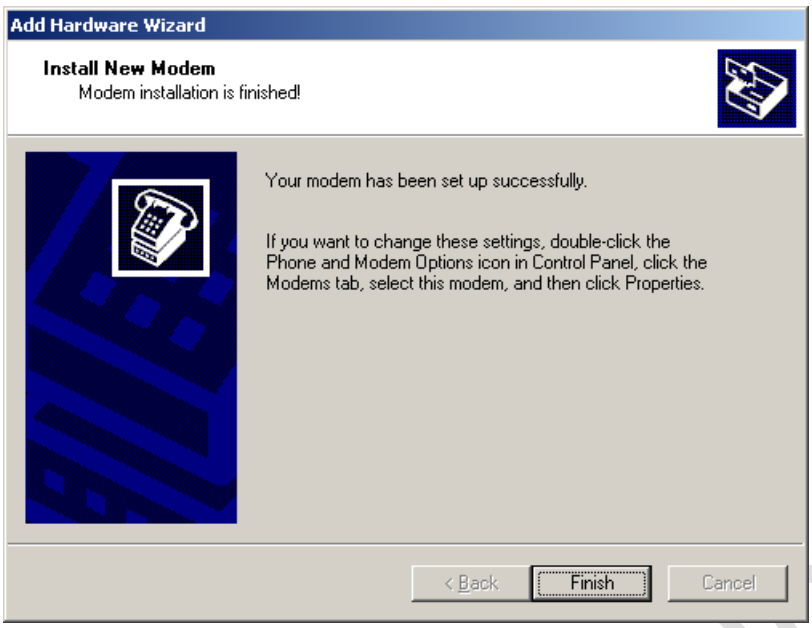
Select “Don’t detect my modem, I will select it from a list”



Select Standard 19200 bps Modem

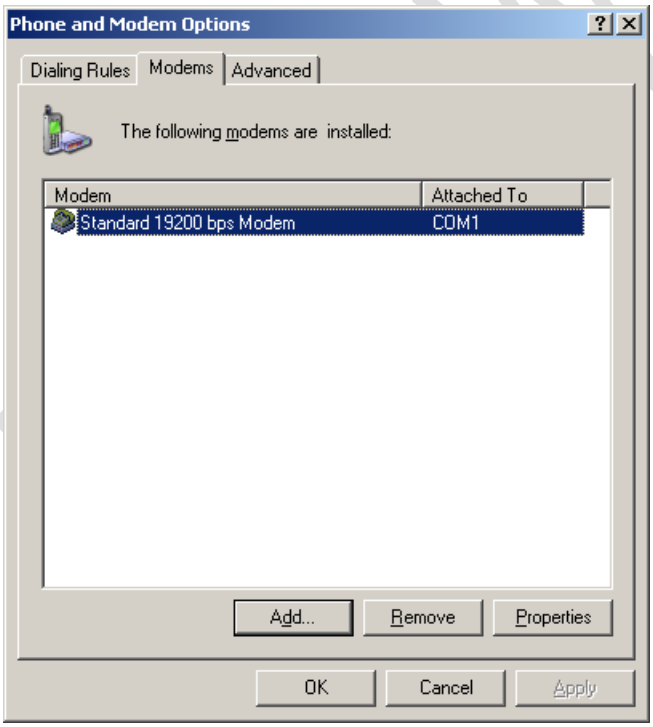

Add Hardware Wizard
Install New Modem
Select the port(s) you want to install the modem on.
You have selected the following modem:
Standard 19200 bps Modem
On which ports do you want to install it?
All ports
Selected ports
COM1
< Back
Next >
Cancel

Select port COM1

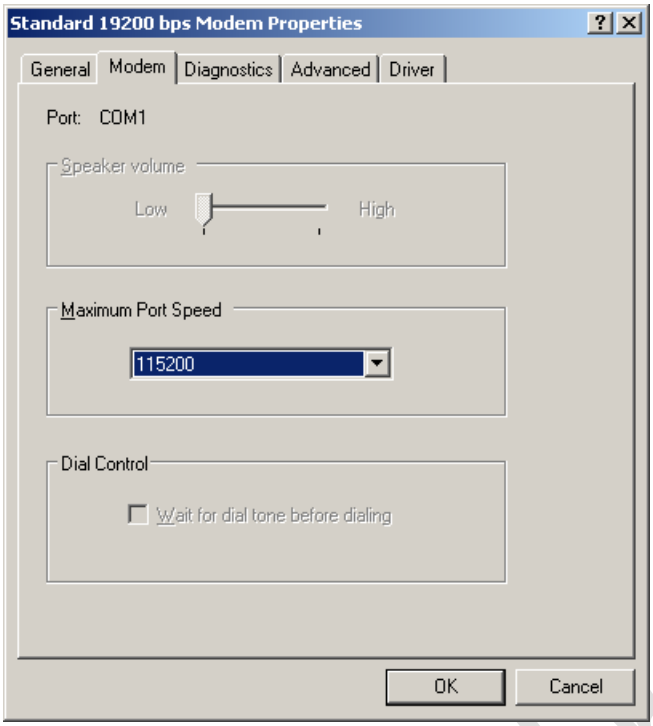

Add Hardware Wizard
Install New Modem
Modem installation is finished!
Your modem has been set up successfully.
If you want to change these settings, double-click the Phone and Modem Options icon in Control Panel, click the Modems tab, select this modem, and then click Properties.
< Back
Finish
Cancel

Finish.

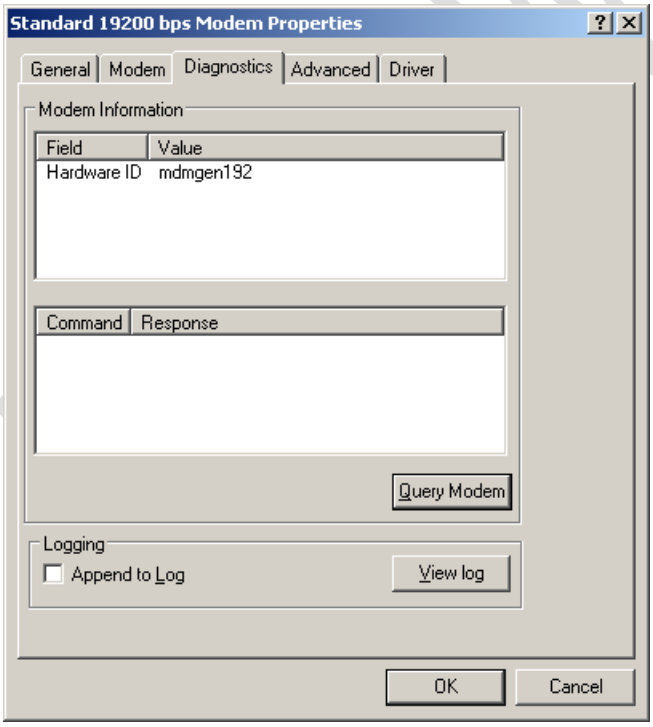
Setting the 19200 Modem



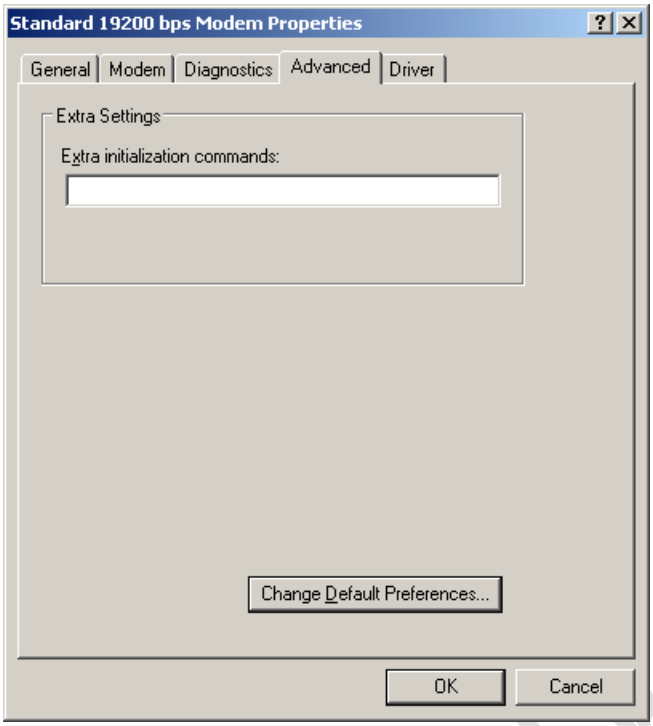
Open the standard 19200 bps Modem properies



Tab “Modem”, change the maximun port speed to 115200

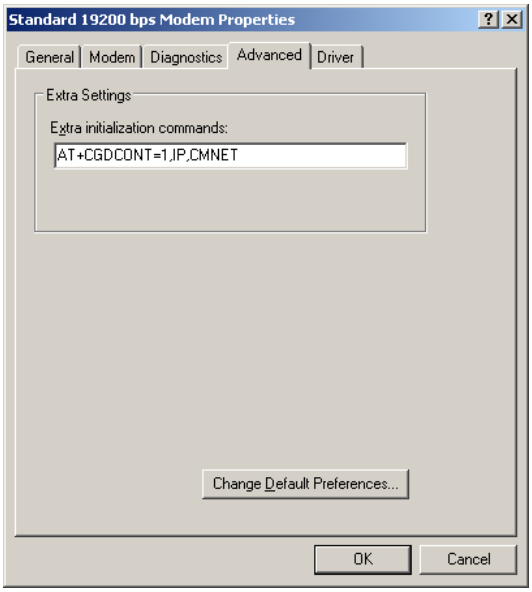


Open tab “Diagnostics”, Query Modem for detect the modem statu.

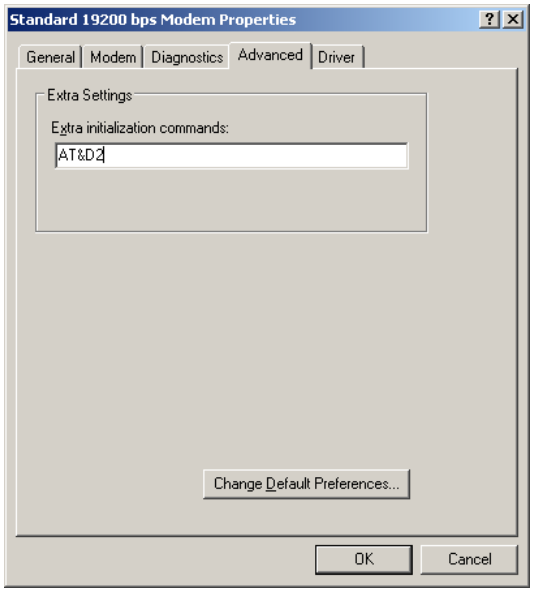


Open tab ”Advanced”, fill the extra initialization commands

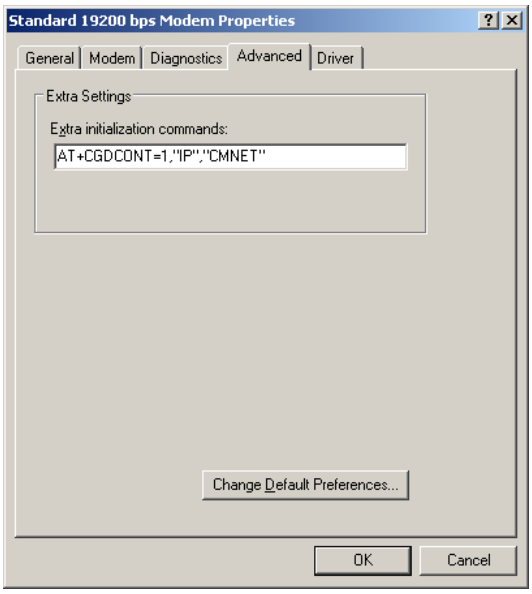
Type	Extra initialization command
M12S211	AT+CGDCONT=1,IP,CMNET
M12Z111	AT+CGDCONT=1,”IP”,”CMNET”
M12AZ1411	
M12AC111	
M12O111	
M12N111	
M12N211	
M12G111	
M12H111	
M13Z311	AT&D2
M13Z811	
M13H211	
M13H311	



（M12S211）

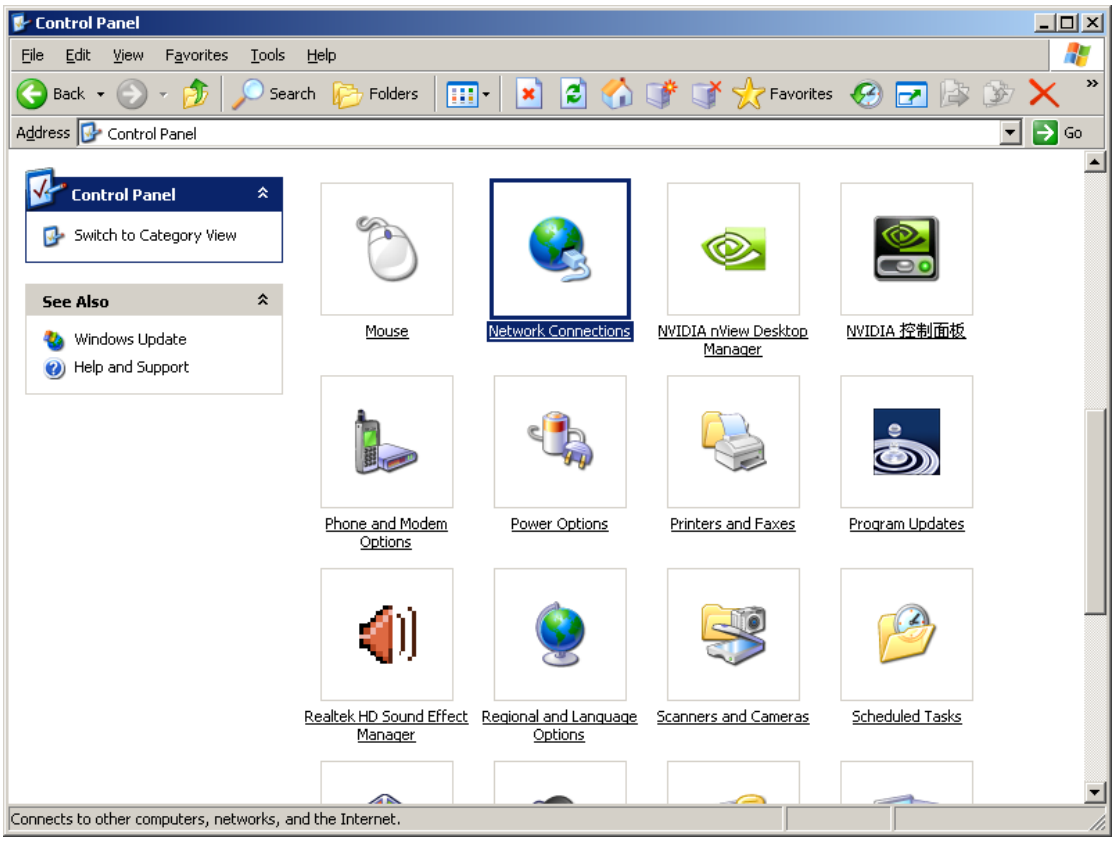


（M13）

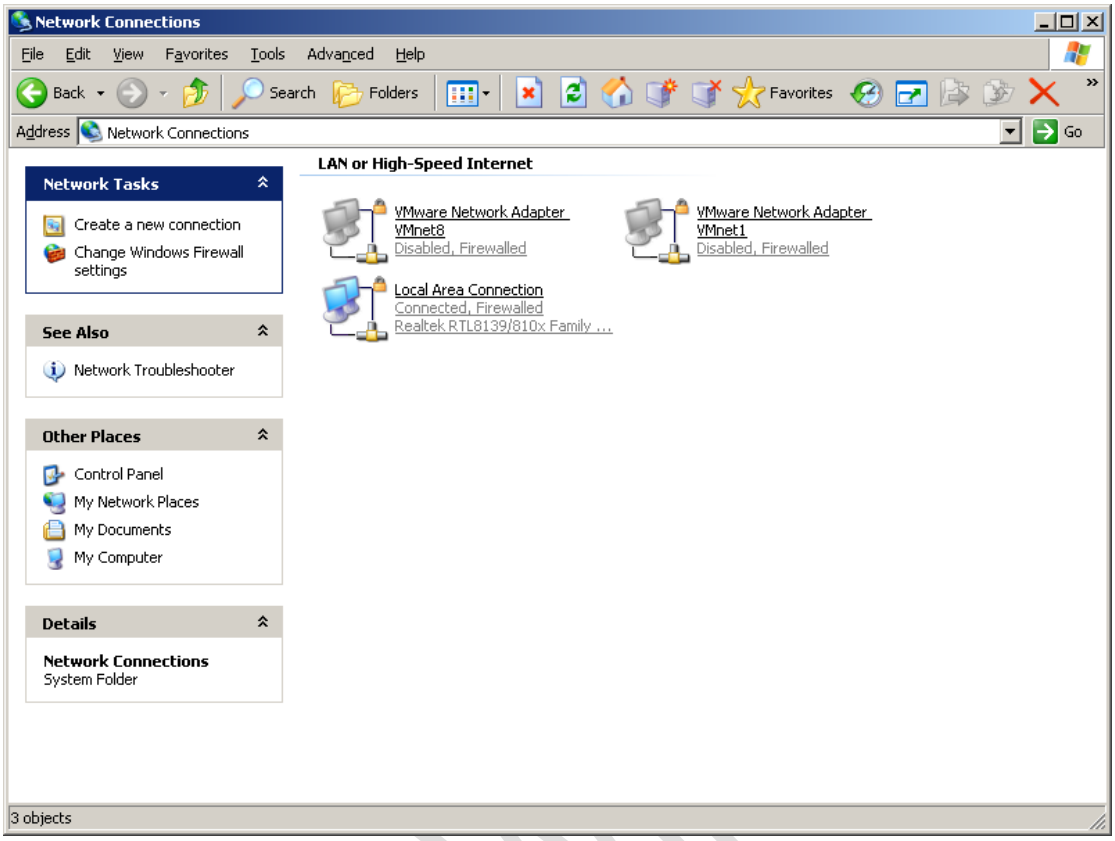


（M12Z111/M12O111/M12N111/M12N211/M12G111/M12H111）

Add Connection



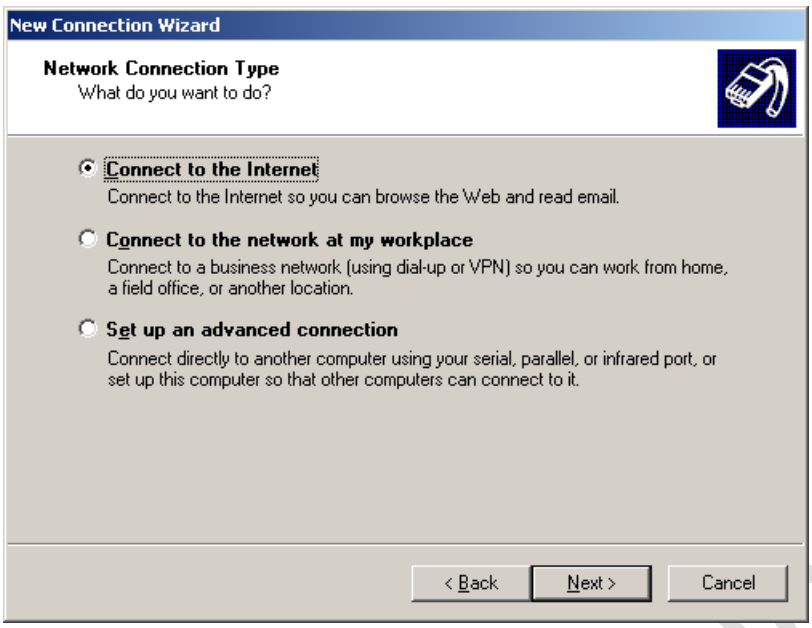
Open the Network Connections



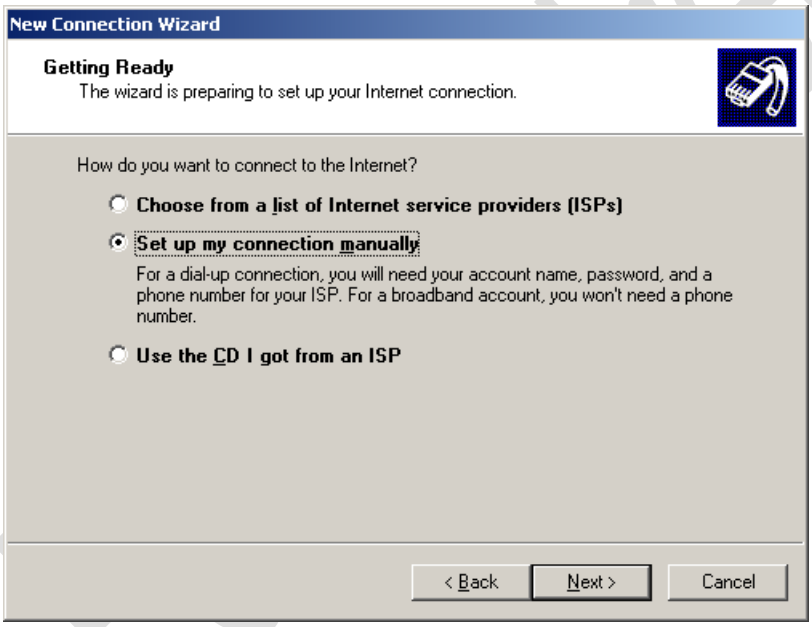
Create a new connection

New Connection Wizard
Welcome to the New Connection Wizard
This wizard helps you:
• Connect to the Internet.
• Connect to a private network, such as your workplace network.
To continue, click Next.
< Back
Next >
Cancel

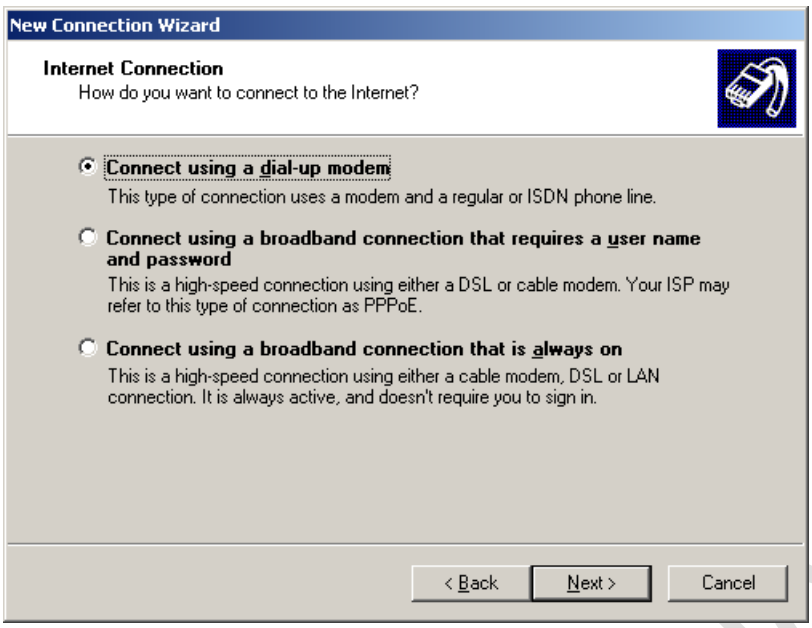
Click next


New Connection Wizard
Network Connection Type
What do you want to do?
Connect to the Internet
Connect to the Internet so you can browse the Web and read email.
Connect to the network at my workplace
Connect to a business network (using dial-up or VPN) so you can work from home, a field office, or another location.
Set up an advanced connection
Connect directly to another computer using your serial, parallel, or infrared port, or set up this computer so that other computers can connect to it.
< Back
Next >
Cancel

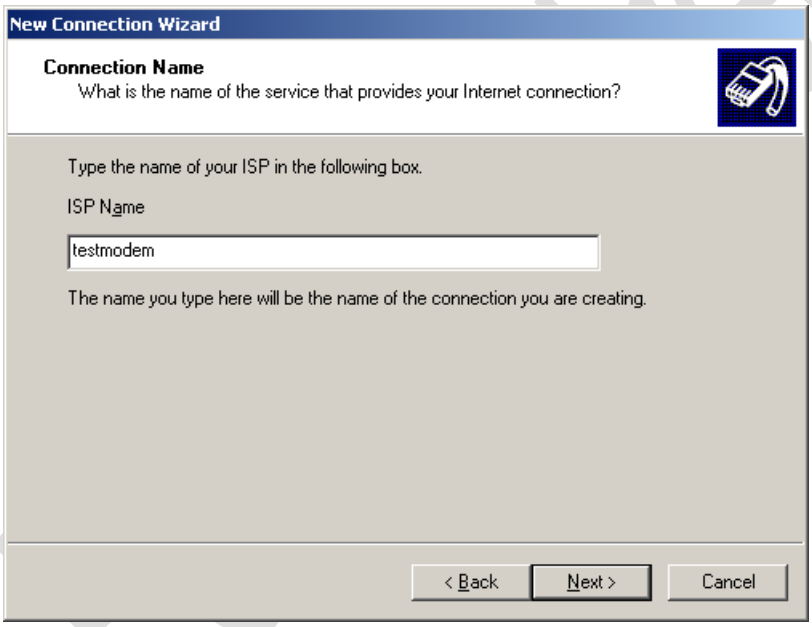
Choose commect to the internet


New Connection Wizard
Getting Ready
The wizard is preparing to set up your Internet connection.
How do you want to connect to the Internet?
Choose from a list of Internet service providers (ISPs)
Set up my connection manually
For a dial-up connection, you will need your account name, password, and a phone number for your ISP. For a broadband account, you won't need a phone number.
Use the CD I got from an ISP
< Back
Next >
Cancel

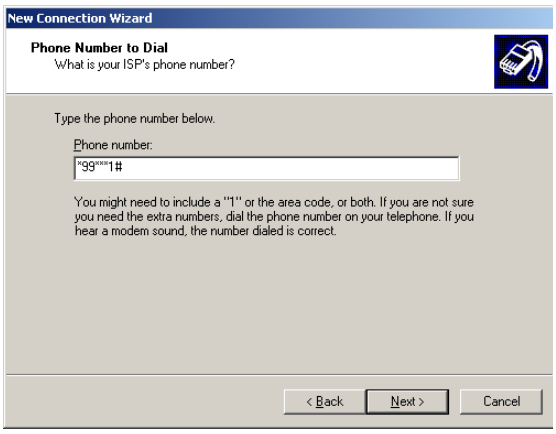
Set up my connection manually

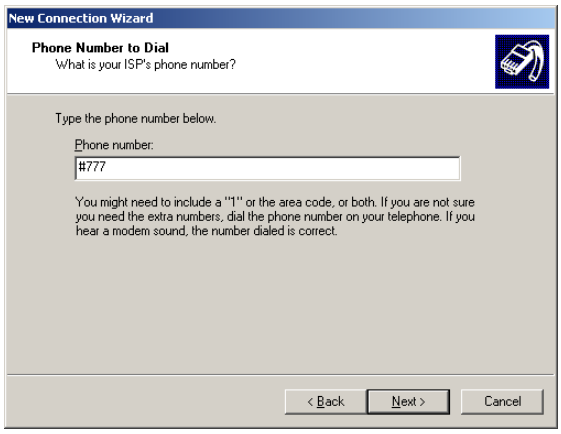

New Connection Wizard
Internet Connection
How do you want to connect to the Internet?
Connect using a dial-up modem
This type of connection uses a modem and a regular or ISDN phone line.
Connect using a broadband connection that requires a user name and password
This is a high-speed connection using either a DSL or cable modem. Your ISP may refer to this type of connection as PPPoE.
Connect using a broadband connection that is always on
This is a high-speed connection using either a cable modem, DSL or LAN connection. It is always active, and doesn't require you to sign in.
< Back
Next >
Cancel

Connect using a dial-up modem


New Connection Wizard
Connection Name
What is the name of the service that provides your Internet connection?
Type the name of your ISP in the following box.
ISP Name
testmodem
The name you type here will be the name of the connection you are creating.
< Back
Next >
Cancel

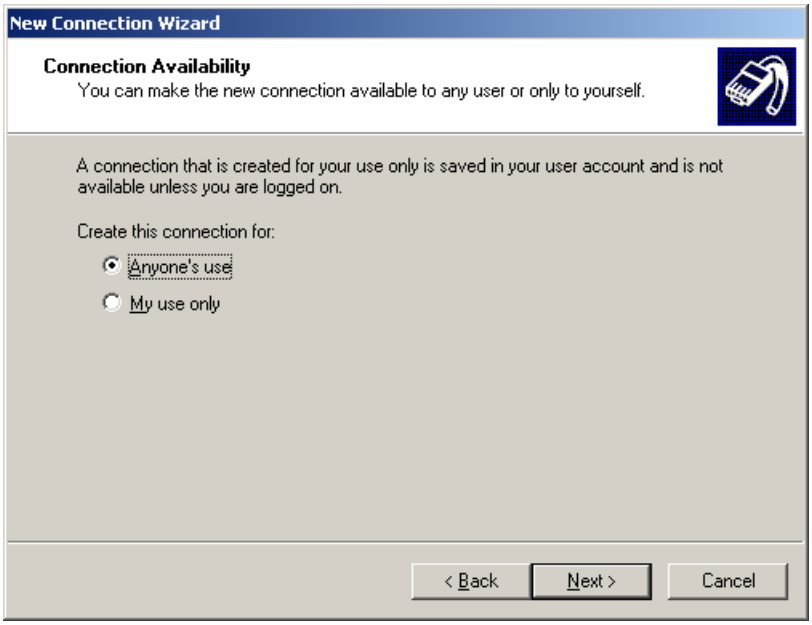
Type the name of connection


New Connection Wizard
Phone Number to Dial
What is your ISP's phone number?
Type the phone number below.
Phone number:
*99***1#
You might need to include a "1" or the area code, or both. If you are not sure you need the extra numbers, dial the phone number on your telephone. If you hear a modem sound, the number dialed is correct.
< Back
Next >
Cancel

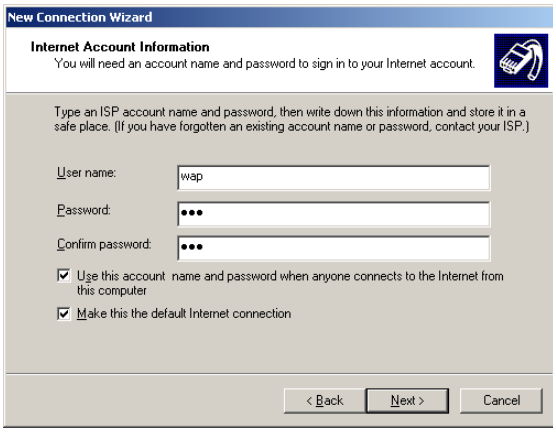

New Connection Wizard
Phone Number to Dial
What is your ISP's phone number?
Type the phone number below.
Phone number:
#777
You might need to include a "1" or the area code, or both. If you are not sure you need the extra numbers, dial the phone number on your telephone. If you hear a modem sound, the number dialed is correct.
< Back
Next >
Cancel

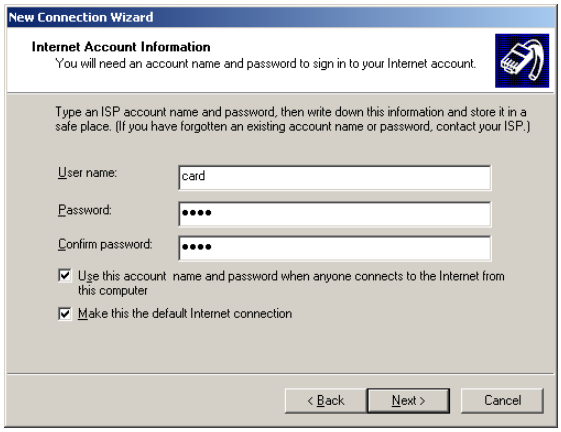
(M12) (M13)

Input the ISP phone number, “*99***1#” for M12 and “#777” for M13


New Connection Wizard
Connection Availability
You can make the new connection available to any user or only to yourself.
A connection that is created for your use only is saved in your user account and is not available unless you are logged on.
Create this connection for:
Anyone's use
My use only
< Back
Next >
Cancel

Select the account


New Connection Wizard
Internet Account Information
You will need an account name and password to sign in to your Internet account.
Type an ISP account name and password, then write down this information and store it in a safe place. (If you have forgotten an existing account name or password, contact your ISP.)
User name:
wap
Password:
Confirm password:
Use this account name and password when anyone connects to the Internet from this computer
Make this the default Internet connection
< Back
Next >
Cancel


New Connection Wizard
Internet Account Information
You will need an account name and password to sign in to your Internet account.
Type an ISP account name and password, then write down this information and store it in a safe place. (If you have forgotten an existing account name or password, contact your ISP.)
User name:
card
Password:
Confirm password:
Use this account name and password when anyone connects to the Internet from this computer
Make this the default Internet connection
< Back
Next >
Cancel

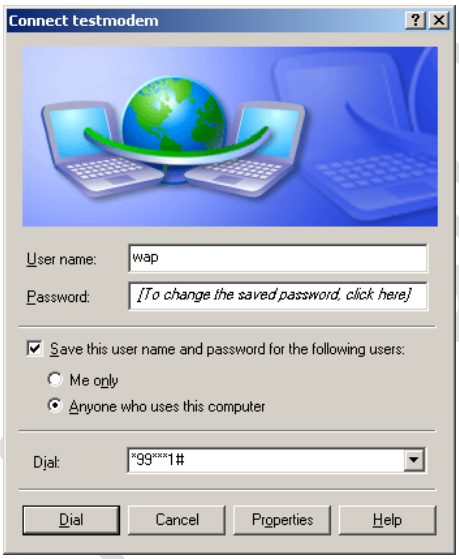
(M12) (M13)

Type the ISP account name and password, “wap”/“wap” for M12 in the China Mobile and

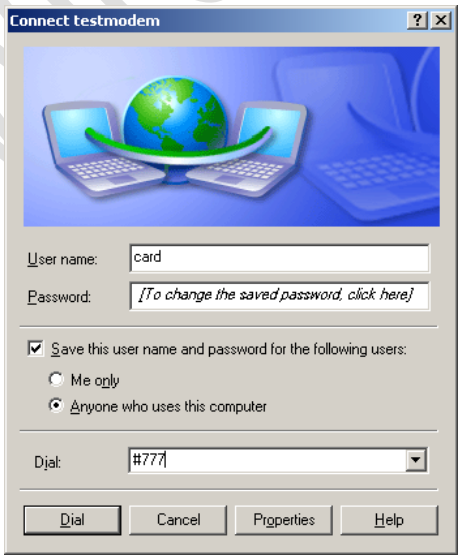
“card”/”card” for M13 in the China Telecom

New Connection Wizard
Completing the New Connection Wizard
You have successfully completed the steps needed to create the following connection:
testmodem
Make this the default connection
Share with all users of this computer
Use the same user name & password for everyone
The connection will be saved in the Network Connections folder.
Add a shortcut to this connection to my desktop
To create the connection and close this wizard, click Finish.
< Back
Finish
Cancel

Finish.

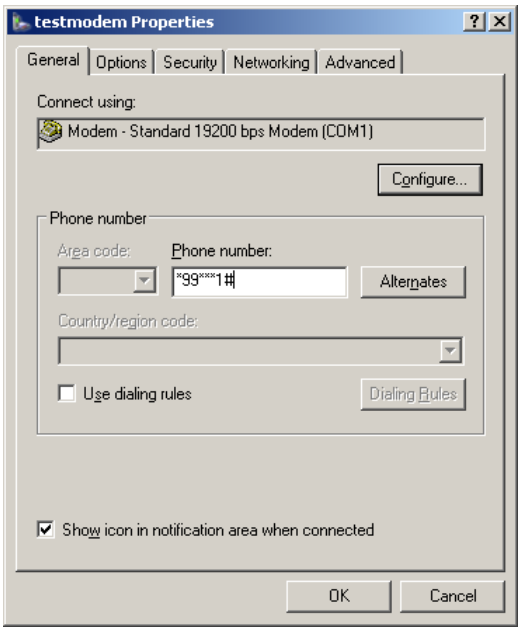


(M12)

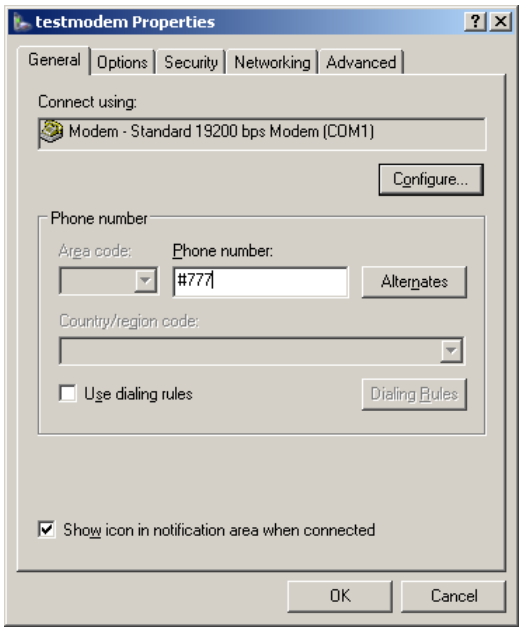


(M13)

Open the dial-up connection, click properties.

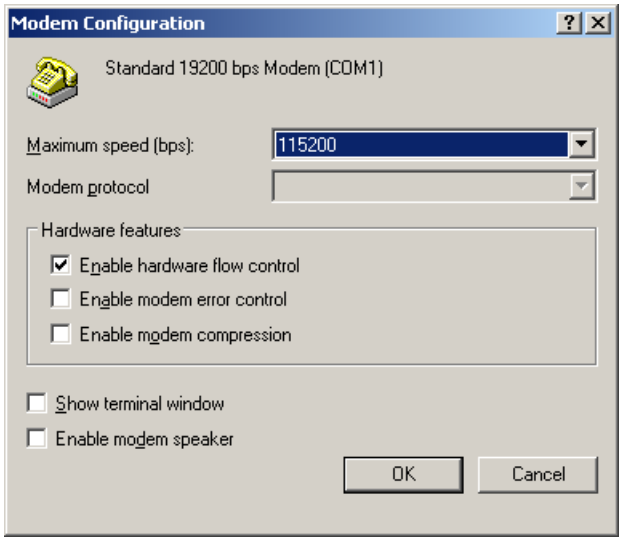


(M12)



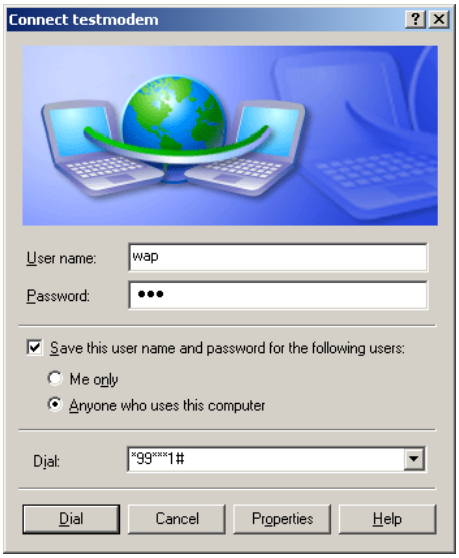
(M13)

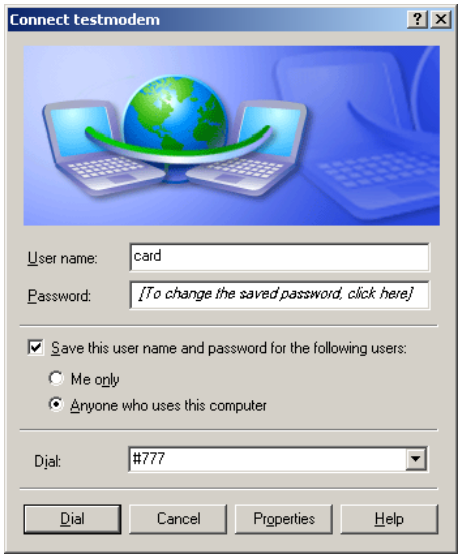
Click configure



Chang the maximun speed to 115200

Dial Up





(M12) (M13)

Click Dial, then the connection will establish automatically.

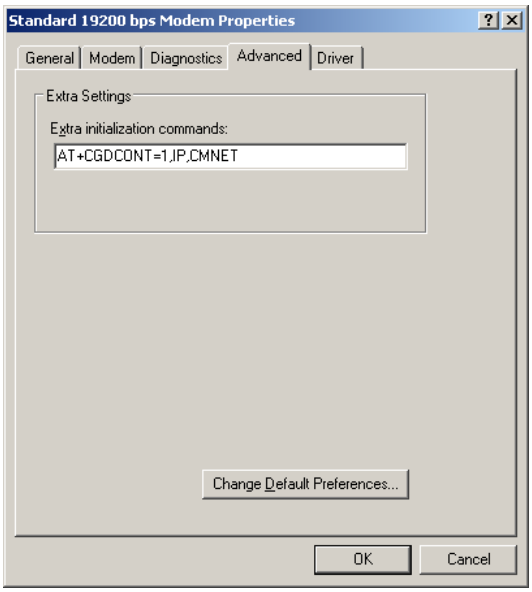
APN/VPDN Setting

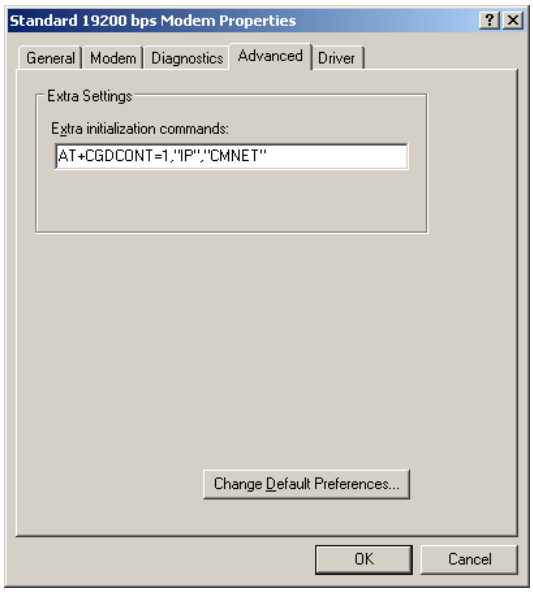
APN Setting

The APN is special parameter provide by ISP. Follow is a sample by China Mobile, which APN is “CMNET”

AT+CGDCONT=1,IP,CMNET // M12S211

AT+CGDCONT=1,"IP","CMNET" // M12Z111/M12O111/M12N111/M12N211/M12G111/M12H111

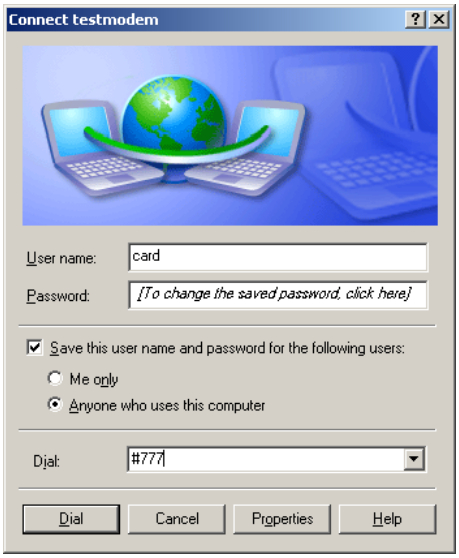




（M12S211） （M12Z111/M12O111/M12N111/M12N211/M12G111/M12H111）

VPDN Setting

The VPDN have special user name and password, whick provice by the ISP. The follow sample is the provide by China Telecom



CSD

Relate Command

Modem Initial Command

AT&F0<cr> // restore parameters

AT+IPR=115200<cr> // setting fixed baud rate

AT&W<cr> //保存参数

Note:

n=0/300/600/1200/2400/4800/9600/14400/28800/38400/57600/115200

（M12S211 factory defautl baud rate is 0(auto detect), other types factory default baud rate is 115200）

Server Initial

ATS0=2<cr> // auto answer after 2 ring received.

Client Dial A Data Call

ATD[dn]<cr> // data call without ";", and [dn] is the CSD server number

Server Manual Answer

ATA<cr> // manual answer

Comunication Operate Command

+++ // terminal data transfer, back to the command mode

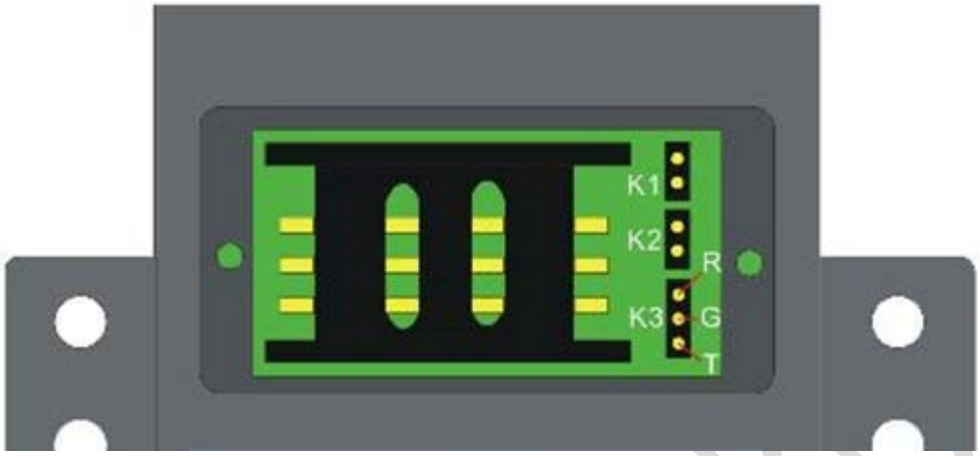
ATO<cr> // switch command mode to data transfer mode

Hang Up

ATH<cr> // hang up the data channel

Fowell Wireless

Hardware Watchdog

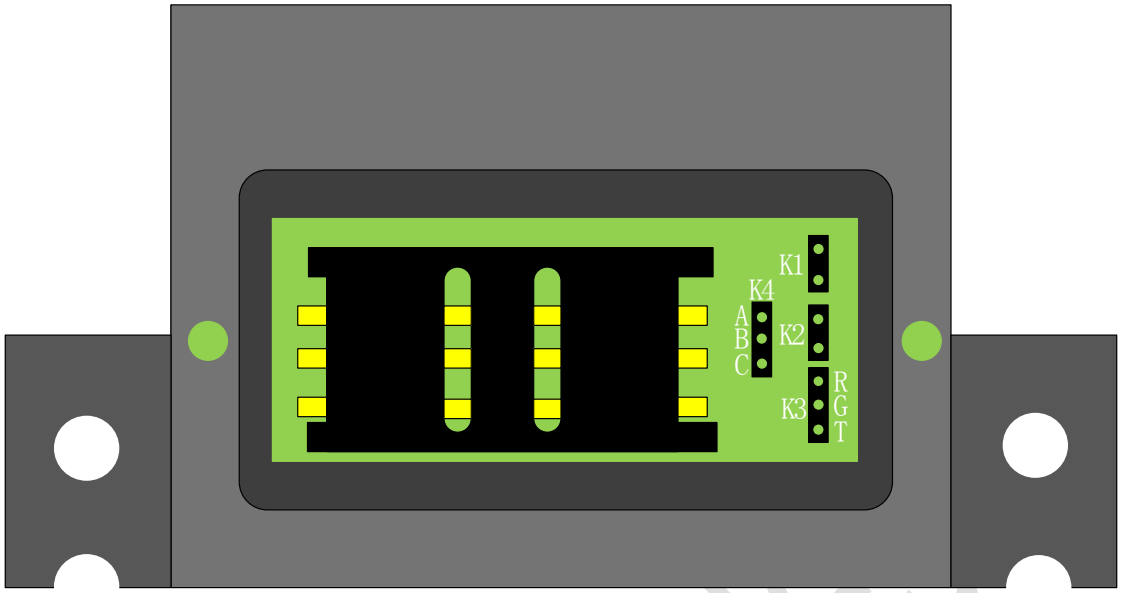


	K1	K2
Disable Watchdog	Open	Open
15 mins	Open	Shortcut
30 mins	Shortcut	Open
5 mins	Shortcut	Shortcut

K3	Describe
RG Shortcut	Reserve
GT Shortcut	Monitor receive
Empty	Reserve

NOTICE: M12AZ1411 does not have Hardware flow monitoring;M12AC111 is different from the figure above, hardwareware jumpper settings of M12AC111 are below:

Fowell Wireless



The settings of K1、K2 and K3 is same to the table above ， it increase K4，setting method is below

K4	说明
Normal working	AB shortcut
Upgrade	BC shortcut

Forwell Wireless

Audio Interface

This interface is option base the order.

	Name	Input/Output	PIN	Describe	Memo
Red	EPP	O	Output Positive	Vout=3.7V	
Green	EPN	O	Output Negative		
Yellow	MICP	I	Input Positive	Vimax=1.03Vpp at Ri=2 Ω	
Black	MICN	I	Input Negative	Vsupply=2.65V at Rsupply=4K Ω	
Blue	STATUS	O	System Status	Normal: 3.7V Reset: 0V Io>500mA Voh=3.69V Vol<0.5V	

Forwell Wirel

Product List

Name	Unit	Quantity	Describe	Picture
M1	Item	1	Device	
Garantee Card	Piece	1	Standard Supply	
Power Adapter	Item	1	DC 9V1A	
RS-232 Cable	Item	1	Standard Supply	
Antenna	Item	1	Standard Supply	
Product CD	Piece	1	Standard Supply	

Forwell Wireless